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ALTERNATIVE TAX-BENEFIT STRATEGIES TO SUPPORT CHILDREN IN THE EUROPEAN UNION:

RECENT REFORMS IN AUSTRIA, SPAIN AND THE UK

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Founded in 1963 by two prominent Austrians living in exile – the sociologist Paul F. Lazarsfeld and the economist Oskar Morgenstern – with the financial support from the Ford Foundation, the Austrian Federal Ministry of Education and the City of Vienna, the Institute for Advanced Studies (IHS) is the first institution for postgraduate education and research in economics and the social sciences in Austria. The **Economics Series** presents research done at the Department of Economics and Finance and aims to share "work in progress" in a timely way before formal publication. As usual, authors bear full responsibility for the content of their contributions.

Das Institut für Höhere Studien (IHS) wurde im Jahr 1963 von zwei prominenten Exilösterreichern – dem Soziologen Paul F. Lazarsfeld und dem Ökonomen Oskar Morgenstern – mit Hilfe der Ford-Stiftung, des Österreichischen Bundesministeriums für Unterricht und der Stadt Wien gegründet und ist somit die erste nachuniversitäre Lehr- und Forschungsstätte für die Sozial- und Wirtschafts-wissenschaften in Österreich. Die **Reihe Ökonomie** bietet Einblick in die Forschungsarbeit der Abteilung für Ökonomie und Finanzwirtschaft und verfolgt das Ziel, abteilungsinterne Diskussionsbeiträge einer breiteren fachinternen Öffentlichkeit zugänglich zu machen. Die inhaltliche Verantwortung für die veröffentlichten Beiträge liegt bei den Autoren und Autorinnen.

Abstract

We compare three EU countries that have recently experienced substantial but very different reforms of their family support systems: Austria, Spain and the UK. The structure of these systems is different: Austria emphases universal benefits, Spain tax concessions and the UK means-tested benefits. First the paper compares the distributional implications of these three approaches. The recent reforms have reinforced existing structures while increasing the amount of spending for children. The second step is to ask: What would have happened if these countries had transformed the architecture of their systems in either of the other two directions? We use EUROMOD, the European tax-benefit microsimulation model that is designed for making cross-country comparisons and answering “what if” questions such as these. We find that the three factors that can be distinguished – the level of spending, its structure, and the way it impacts in a national context – are all important to varying degrees.

Keywords

Children, European Union, policy reform, microsimulation

JEL Classification

C8, I3

Comments

This paper presents a further analysis of tax and transfers systems in support of child poverty reduction carried out in the context of the UNICEF Innocenti Report Card 6 on Child Poverty in Rich Countries (2005). It is also published as Innocenti Working Paper 2005-07 and as EUROMOD Working Paper EM10/05. The research reported here was funded in part by the Nuffield Foundation and supported by activities within the MICRESA (Micro-level Analysis of the European Social Agenda) project, financed by the Improving Human Potential programme of the European Commission (SERD-2001-00099). The authors are indebted to Martin Evans, Daniela Mantovani, Magda Mercader and Eva Jesperson and her colleagues at the Innocenti Research Centre for helpful comments as well as to all the past and current members of the EUROMOD consortium. However, the results, conclusions and views that are expressed are the sole responsibility of the authors. In particular, this applies to the interpretation of EUROMOD results and any errors in its use. EUROMOD is continually being improved and updated, and the results presented here are the best available at the time of writing.

Contents

Summary:

We compare three EU countries that have recently experienced substantial but very different reforms of their systems to support families with children: Austria, Spain and the United Kingdom. The structure of these systems is different: Austria gives emphasis to universal benefits, Spain to tax concessions and the United Kingdom to means-tested benefits. As a first step the paper compares the distributional implications of these three approaches. The recent reforms have reinforced these existing structures while increasing the amount of public resources directed towards children. The second step is to address the question whether the chosen strategies are the best for each country. What would have happened if instead of reinforcing the existing types of policies these countries had completely transformed the architecture of their systems in either of the other two directions?

We use EUROMOD - the European tax-benefit microsimulation model that is designed for making cross-country comparisons and for answering "what if" questions such as these - to explore the effects of alternative budget-neutral reforms. In particular, in addition to assessing the effects of countries' actual child related reforms from 1998 to 2003, we simulate the substitution ('swap') of child related benefits and tax concessions from one country to another. The changes in household disposable income resulting from these reforms are used to assess their impact on the position of children in the income distribution as a whole, the proportions gaining and losing and the effects on child poverty.

The analysis of the 1998 and 2003 systems reveal that, in real terms, the average spending per child increased by 31 percent in Austria (from 169 to 220 euro per month), 150 percent in Spain (from 13 to 34 euro), and 71 percent in the UK (102 to 174 euro). In Austria and the UK the increase in spending per child is relatively evenly spread over the income distribution, with a slightly lower increase at the top. In Spain the rise in per child spending in the two bottom deciles is negligible, whereas children in the top quintile receive on average more than ten times as much under the 2003 rules as under the 1998 rules. Child poverty rates fall in all countries, but the reductions are particularly significant in the UK (from 32 to 20 percent) and Austria (12 to 9 percent).

The swap of 2003 child policies allows us to draw some conclusions about the three systems regardless of the country in which they are implemented. On vertical equity grounds, UK policies are the most successful at reducing child poverty in all three countries and using a range of proportions of the median as poverty thresholds. In terms of horizontal equity, the Austrian system generates the highest redistribution from childless individuals to families with children and guarantees, in all countries, the right to a similar level of protection for all children regardless their parent's income position. On the other hand, with a low expenditure level and a pro-rich distribution, the Spanish policies can hardly meet any equity objective.

While there are some important aspects that have not been considered in this study, for example the effect of the alternative systems on parental work incentives and on benefit take-up rates, and the role of in-kind benefits, this study demonstrates the potential of comparing systems of support by "swapping" them between countries. This method using microsimulation allows us to distinguish between the effects of level of spending, the relative importance of policy structure and design, and the differential impacts of policies in particular national contexts.

Introduction

Social, demographic and economic changes in recent years have modified the profile of the groups facing higher risks of poverty and social exclusion. Most empirical evidence shows that children are one of these groups. A recent study carried out by UNICEF states that "the proportion of children living in poverty has risen in a majority of the world's developed economies" (UNICEF, 2005). These findings underpin the growing concern about the need to support families with children.

Following that concern, many European Union member states have recently implemented reforms. In some cases the expenditure level has increased considerably and some improvements in indicators of the economic well-being of children have been achieved or are anticipated. However, there are obviously limits to the amount of resources that governments can target on children. Hence, it is essential to understand the structure of these reforms and to establish whether they achieve their objectives and that better alternatives are not available.

In this paper we analyse and compare three EU countries that have recently experienced substantial but very different reforms of their systems to support families with children: Austria, Spain and the United Kingdom. The structure of these systems is very different: Austria gives emphasis to universal benefits, Spain to tax concessions and the United Kingdom to means-tested benefits. Basically, the recent reforms have reinforced these structures in each country while increasing the amount of public resources directed towards children. However, are the chosen strategies the most adequate for each country? What would have happened to the economic well-being of children if instead of reinforcing the existing types of policies these countries had completely transformed the architecture of their systems in another direction? More concretely, what would be the effect on child poverty and on income distribution, and who would be the gainers and losers if (for example) Austria had adopted the Spanish system, while spending the same overall level as currently in Austria? Tax-benefit microsimulation models are designed precisely to provide us with evidence to answer this type of "what if" question. We use EUROMOD, a tax-benefit microsimulation model that covers all 15 "old" EU countries and is designed for making cross-country comparisons.[2] It is based on samples of households that are representative at the national level for each country. Here we simulate and compare the effects of the 1998 and 2003 tax-benefit systems on children's household

2 EUROMOD currently covers the 15 Member States included in the EU before May 2004.

incomes. Then, we swap the parts of the 2003 systems related to children from one country to another and reassess the impact on children after these 'alternative' reforms.

The paper is organized as follows. Section 1 addresses some of the issues and recent trends that affect the economic well-being of children in the EU. Section 2 describes the policies to support families with children and their recent reforms in Austria, Spain and the United Kingdom. Section 3 presents some methodological issues related to the use of the microsimulation model EUROMOD; it explains how simulations were carried out, as well as some of the key definitions and assumptions that were used. Section 4 assesses the impact of each reform within its country, while sections 5, 6 and 7 explore the effects of exchanging child policies across the income distribution and on child poverty, and examine who gains and who loses from the "borrowed" policies. Finally, section 8 offers some concluding comments.

1 The economic well-being of children in the EU

Economic indicators of living standards, in particular household income, reveal just one of the dimensions that affect the well-being of children. Nevertheless, there is increasing evidence about a significant correlation (not necessarily causality) between income poverty and problems in other dimensions of well-being, such as higher risk of education failure, poor health, teenage pregnancy, abuse, criminal and anti-social behaviour.[3]

Three elements that mainly determine the economic well-being of children have been subject to considerable change in recent years: social trends, labour market conditions and public intervention (UNICEF, 2005).

Changes in social and cultural values and practices are transforming social needs and the type of groups that face higher risks of poverty and social exclusion. The increasing number of people living in 'non traditional' households, decline in fertility rates, immigration, and increase in the average age and educational level of parents are changing the patterns of well-being and the risk of poverty among children. Of course not all of these changes pull child well-being in the wrong or in the same direction. For example, Chen and Corak (2005) estimate that child poverty is 0.4 percentage points lower due to the fact that in average children now live with older parents. On the other hand, child poverty is 0.7 percentage points higher because of the increase in the proportion of children living with only one parent. These changes also affect the cost of policies targeted to support children. Adam, Brewer and Reed (2002) calculate that if the

[3] Here and henceforth we use "poverty" to refer to the risk of *relative income poverty*. For a review of the principles of measuring poverty and, in particular, relative income poverty analysis in developed countries, see Atkinson (1998) and Corak (2005), among others.

characteristics of British families in 2003 were the same as in 1978, the average expenditure on child support per child would be 13 percent lower in 2003 than in fact it was.

Children's economic well-being is also affected by the employment status of their parents. In the past, the 'job for a lifetime' and the 'male breadwinner model' assumed that the working male was able to earn enough to maintain his family. Increasing female participation, labour market instability, wider wage gap between qualified and unqualified workers, and migration of low-skilled jobs have removed the labour market foundations of this model (Esping-Andersen, 1999). The presence of second earner in the household has become the norm in many countries, and decisive in fully covering family economic needs. Chen and Corak (2005) reveal that labour market changes, in particular the increase in the employment rate and earnings of women with children, have contributed in the fall of child poverty in the US and the UK. In that sense, the reconciliation between work and family life has become a growing concern. This reconciliation problem addresses a very relevant gender issue, as women are generally the most affected. Table 1 shows that in all EU-15 countries but Denmark the employment rate of women aged 20-49 is considerably lower if they have children aged under 12. In contrast, the employment rate of men in the same age group is higher if they have children.

Table 1. Total and part-time employment rates for women and men in 2003

	Women aged 20 to 49				Men aged 20 to 49			
	Without children		With children		Without children		With children	
	Total	Part-time	Total	Part-time	Total	Part-time	Total	Part-time
Austria	83.4	16.8	72.1	32.3	91.5	2.3	95.6	1.5
Belgium	74.6	21.8	67.5	27.2	87.2	4.2	91.7	4.3
Denmark	77.1	:	79.9	:	82.8	:	93.2	:
Finland	77.9	10.2	72.0	7.8	76.6	5.0	92.4	(2.4)
France	76.6	14.1	66.3	17.6	85.4	3.3	91.4	2.5
Germany	79.5	21.3	60.0	35.1	83.1	4.3	89.7	3.0
Greece	56.5	4.9	52.7	6.7	86.8	2.1	96.5	2.4
Ireland	:	:	:	:	:	:	:	:
Italy	60.4	12.3	49.7	15.2	91.6	3.3	94.0	3.3
Luxembourg	74.8	15.5	59.3	26.1	90.7	:	96.6	(1.6)
Netherlands	81.9	33.0	69.6	54.7	88.6	7.8	93.6	4.2
Portugal	76.6	7.7	76.4	7.2	90.8	2.0	94.6	(1.0)
Spain	61.7	8.7	51.2	9.7	90.0	1.4	93.0	0.9
Sweden	:	:	:	:	:	:	:	:
United Kingdom	83.2	18.5	61.8	36.2	87.1	3.4	90.9	3.3

: Data not available or not reliable due to a small sample size
( ) Data less reliable due to a small sample size
Source: Aliaga (2005)

Finally, government expenditure, particularly social protection, can be a decisive element in guaranteeing the economic well-being of children when the previous determinants fail to provide them the resources required to meet their needs. Table 2 shows EUROSTAT

estimates of social protection in general, and family benefits in particular, as a proportion of GDP in 1998 and 2002. The table shows that the expenditure on family support follows a similar ranking of countries as the overall expenditure on social protection. The main exceptions are Luxembourg[4] and Ireland that spend proportionally more on family support, and the Netherlands that spends considerably less. In sum, Scandinavian countries, Luxembourg, Germany and Austria are the countries that spend most on family support, while Southern countries (except Greece) and the Netherlands spend least. In recent years, expenditure on family benefits, as proportion of GDP, has considerably increased in four countries (Austria, Germany, Ireland and Luxembourg), and substantially fallen in two (Finland and the UK).

Table 2. Expenditure on social protection and family support as a proportion of GDP in 1998 and 2002

	Social protection			Family support		
	1998	2002	%pt change	1998	2002	%pt change
Austria	28.5	29.1	0.6	2.7	3.0	0.3
Belgium	27.6	27.8	0.2	2.4	2.2	-0.2
Denmark	30.2	30.0	-0.2	3.8	3.9	0.1
Finland	27.2	26.4	-0.8	3.4	3.0	-0.4
France	30.5	30.6	0.1	2.8	2.7	-0.1
Germany	29.3	30.5	1.2	2.8	3.1	0.3
Greece	24.2	26.6	2.4	1.9	1.8	-0.1
Ireland	15.4	16.0	0.6	1.9	2.4	0.5
Italy	25.0	26.1	1.1	0.9	1.0	0.1
Luxembourg	21.7	22.7	1.0	3.0	3.7	0.7
Netherlands	28.4	28.5	0.1	1.2	1.2	0.0
Portugal	22.1	25.4	3.3	1.0	1.1	0.1
Spain	20.6	20.2	-0.4	0.5	0.5	0.0
Sweden	32.2	32.5	0.3	3.0	3.0	0.0
UK	26.9	27.6	0.7	2.3	1.8	-0.5

Source: Eurostat (2005)

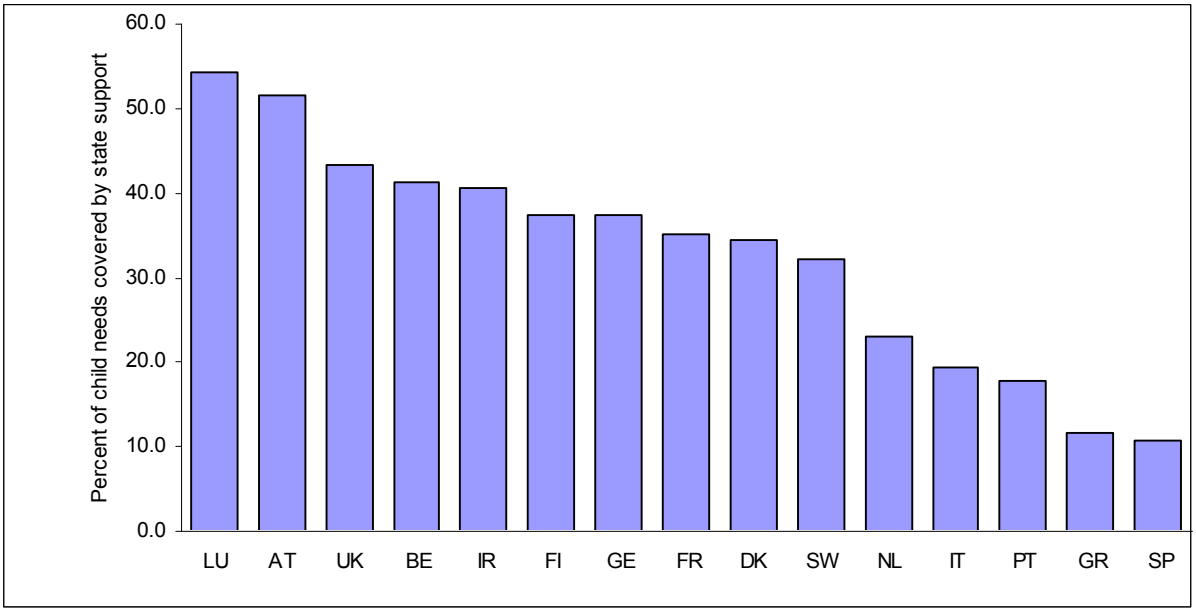
These social protection statistics do not include the value of tax concessions and some social transfers which are of direct benefit to children but are not categorised as family support (for example, housing and social assistance benefits). So while, according to this table, the expenditure on family support in the UK fell by 5 percentage points between 1998 and 2002, in fact the recent reforms have shifted a considerable part of support from social benefits to tax credits and, overall, family support has risen. This highlights the difficultly in using a single concept to measure support over time or across countries.[5] In the analysis which follows we focus on elements of both cash benefits and direct personal taxes which are specifically designed for the support of children and their families.

4 The relative proportion on social expenditure for Luxembourg is driven, in part, by the high measure of GDP, which is influenced by cross-border workers.

5 Corak, Lietz and Sutherland (2005) consider a range of measures of support for children in cross-national perspective.

Both horizontal and vertical equity arguments justify the need for social protection for families with children. The common horizontal equity argument is the need to compensate parents for direct and indirect costs of children. Despite the increasing sophistication in the theoretical and empirical literature on the measurement of the cost of children since the early work of Rothbarth (1943), there is no clear consensus on the appropriate methods nor on the value of the estimates.[6] Corak, Lietz and Sutherland (2005) use a pragmatic approach to assess the level of compensation of child-target policies on the cost of children to families. This consists in comparing the equivalised income for households with children before and after the presence of children and the net incomes received by family members due to the presence of children. Their results, summarized in Figure 1, reveal that there is wide variation on the average proportion of 'cost of children' covered by child-contingent state support. This ranges from 54 percent in Luxembourg and 52 percent in Austria to 11 percent in Greece and Spain.

Figure 1. Percent of income needs due to children covered by child-contingent state support in the EU15, 2001



Source: Corak, Lietz and Sutherland (2005)

In terms of vertical equity, children are less exposed to the debate about being deserving or undeserving of social protection or the equity-efficiency trade-off. The claim is that children should be protected from poverty even if childbearing is assumed to be a deliberate rational decision since children should not face the consequences of parents' actions. Table 3 shows that, in 2001, the risk of poverty among children was lower than the poverty risk for the overall population in the Scandinavian countries, Greece and

6 See, among others, Deaton and Muellbauer (1986), Buhman et al (1988), Jenkins and Cowell (1994) and Bradbury (2004).

Belgium. On the other hand, the difference between child poverty risk and overall poverty risk is particularly high in the Southern countries (except Greece), Luxembourg and the UK. Finally, according to these figures calculated using two different waves of the European Community Household Panel (ECHP), in recent years child poverty has decreased in the UK and Sweden and increased in Ireland and Italy.

Table 3. The risk of child poverty and overall poverty in the EU-15, 1999 and 2001.

	ECHP 1999		ECHP 2001	
	Aged 0-15	All	Aged 0-15	All
Austria	14	12	13	12
Belgium	12	13	12	13
Denmark	6	11	7	10
Finland	7	11	6	11
France	17	15	18	15
Germany	13	11	14	11
Greece	17	21	18	20
Ireland	21	18	26	21
Italy	22	18	25	19
Luxembourg	19	13	18	12
Netherlands	14	11	16	11
Portugal	26	21	27	20
Spain	25	19	26	19
Sweden	10	9	7	9
UK	29	19	24	17

Sources: Dennis and Guio (2003) and Dennis and Guio (2004). Data on income from the ECHP relate to the year immediately preceding the survey (e.g. 1998 for wave conducted in 1999), whereas the household composition and the socio-demographic characteristics of household members are those registered at the moment of the survey. ECHP 2001 estimates for Denmark are from the Law Model Database and for Sweden from the Income Distribution Survey.

2 Policies to support families with children in 1998 and 2003

This section describes the policies to support families with children in Austria, Spain and the United Kingdom in 1998 and 2003. This description highlights the policies that are analysed in the later parts of the paper, i.e., cash benefits and tax concessions explicitly targeted at families with children.[7]

2.1 Austria

Austria has one of the most generous systems for the support of children in the European Union. In fact, Austria comes top in a ranking of 'child benefit packages' among 22 industrialized countries (Bradshaw and Finch, 2002). Recalling Table 2, the expenditure on family and children social benefits as a percentage of GDP (3%) is one of the highest in the European Union, only below Denmark, Luxembourg and Germany. Support is mainly provided through universal benefits that are supplemented to especially vulnerable population groups. Recent reforms have introduced new benefits and changed

[7] Other policies which are sensitive to the presence of children in the family but not uniquely targeted at families with children (for instance, social assistance), in-kind benefits, and disability benefits are not included in this analysis.

some of the existing ones. These changes have largely reinforced the universal character of the Austrian system. There is no standard definition of children in Austrian policies. The conditions under which a person is considered to be a child vary slightly from policy to policy. In general, most policies define children as people aged under 18, and also those aged up to 25 (sometimes 26) in education and with personal income below a certain limit.

In 1998, there were two policies available for all families with children regardless their income: the *family allowance* ('Familienbeihilfe') and the *child tax credit* ('Kinderabsetzbetrag'). The *family allowance* was a universal social benefit paid for each child in the family. Its amount increased with the age of children and also supplemented in the case of disability.

The *child tax credit* was a fully refundable tax credit with an amount per child that increased with the number of children in the family. Lone parent families were additionally eligible for a partly refundable *lone parent tax credit* ('Alleinerzieherabsetzbetrag').

After the maternity benefit ('Wochengeld'), received eight weeks before and eight weeks after birth, there was a flat rate *parental leave benefit* ('Karenzgeld') for parents of newborn children for a period of up to one and a half years (two years if parents shared child care duties). Mothers who were employed before the birth of the child and with earnings after the birth below a certain limit were eligible.

Low income families receiving *parental leave benefit* were also eligible for a means-tested *supplement to the parental leave benefit* ('Zuschuss zum Karenzgeld').

Low income families with children could also claim a regionally administered *family bonus* ('Familienzuschuss').

Finally, there were two means-tested benefits for families with small children: a lump-sum health check bonus ('Mutter-Kind-Pass-Bonus'), and a periodically paid *small children benefit* ('Kleinkindbeihilfe') for families with parents not receiving maternity benefit and children aged under 1 year.

In 2003, the amount of *family allowance* was between 3 and 11 percent higher in real terms than in 1998. Since 2000, *family allowance* has been supplemented for each child from the second on. Moreover, since 1999, there is a means-tested supplement for every third and further child. Since 2001 a higher income limit for children older than 17 has applied.

Since 2001, the amount of *child tax credit* for the first and second child is equal to that for the third and further children (representing an 85 and 31 percent real increase, respectively, compared with 1998 amounts). The amount for the third and further children was not uprated between 1998 and 2003. The same applies to the amount of *lone parent tax credit*, but since 1999 it has been fully refundable.

In 2002, the *parental leave benefit* was replaced by a 'universal' *childcare benefit* ('Kinderbetreuungsgeld'). This new benefit is available to all parents (not only the employed) of children aged under two and a half (3 if parents share child-care duties) whose income is below a much more generous personal income limit (more than 4 times higher than in the parental leave benefit). The amount of this new benefit is slightly less in real terms than the 1998 parental leave benefit.

The *supplement to the parental leave benefit* ('Zuschuss zum Kinderbetreuungsgeld') was in 2003 linked to the childcare benefit in place of the parental leave benefit. This means that it is available to a greater number of families as it is not restricted to parents who were previously employed. In real terms the amount of this benefit is lower than the 1998 parental leave supplement as the daily rate was increased by just 1 percent.

With the introduction of the childcare benefit the regionally administered *family bonuses* were reduced or entirely abolished. In Vienna, for example, childcare benefit is included in the income test of family bonus with a withdrawal rate of 100 percent.

Finally, the health-check bonus and small children benefit were abolished with the introduction of the child care benefit.

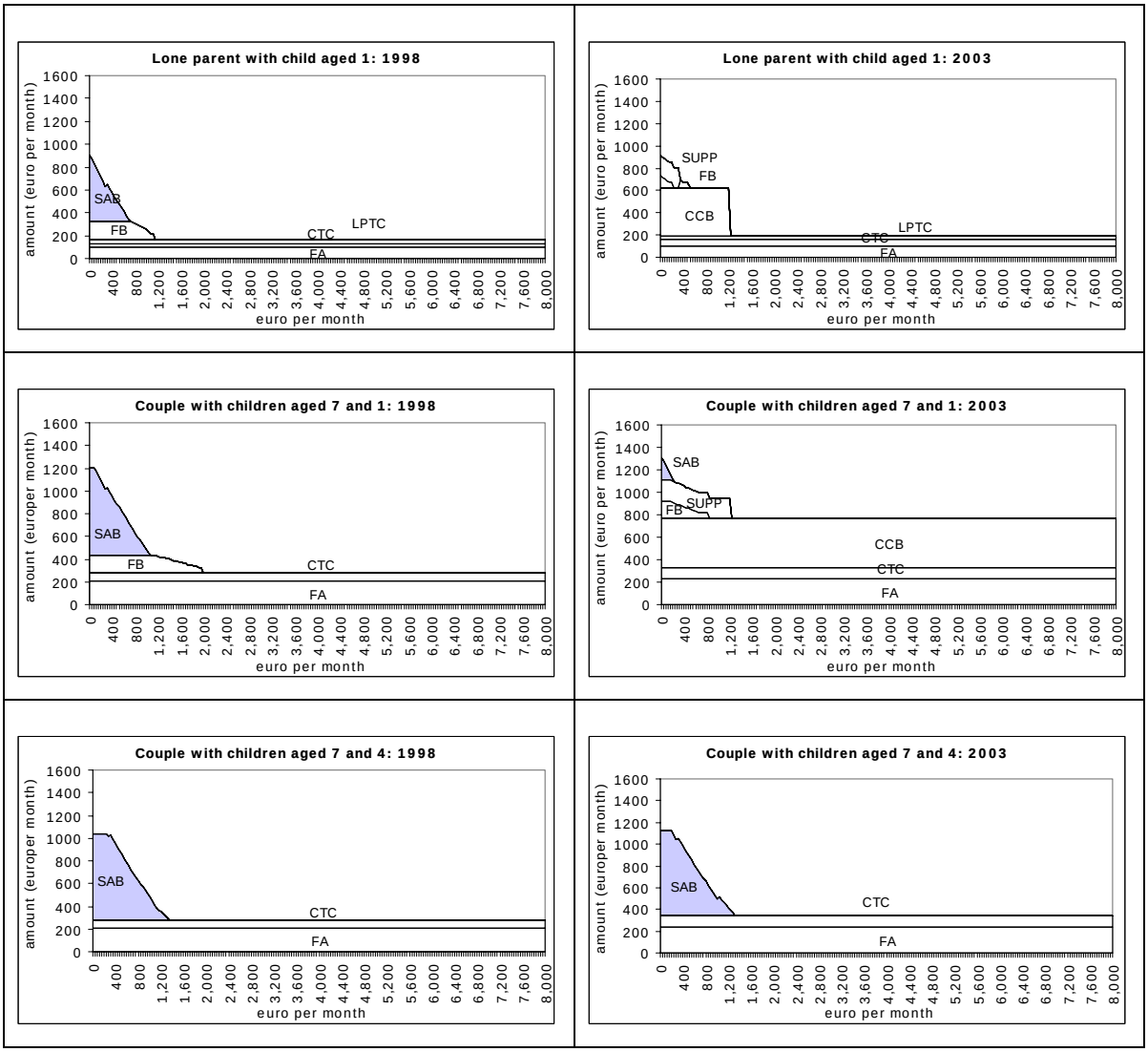
Table 4 summarizes the policies to support families with children in 1998 and 2003 in Austria.

Table 4. Austria: Support to families with children, 1998 and 2003

	1998	Changes between 1998 and 2003
Family allowance	- universal child benefit - amount per child increased with age of children	- amounts updated above inflation - new supplement for second and further children - new means-tested supplement for the third and further children - income limit for children increased
Child tax credit	- fully refundable child tax credit - amount per child increased with the number of children in the family	- amount for first and second children is equal to the third and further children - amount for the third and further children was not updated
Lone parent tax credit	- partly refundable tax credit for lone parents	- amount was not updated - now fully refundable
Parental leave benefit	- parental leave benefit for working parents of new born children who are below a certain personal income limit - paid up to 1.5 (2) years	- replaced by the child care benefit
Child care benefit		- benefit for all parents of new born children who are below a certain personal income limit - paid up to 2.5 (3) years - amount increased slightly less than inflation (comparing to 1998 parental leave benefit) - personal income limit more than quadrupled (comparing to 1998 parental leave benefit)
Supplement to the parental leave benefit (child care benefit)	- means-tested supplement to the parental leave benefit for single parents and couples with low income spouse	- linked to the child care benefit
Family bonus	- regionally administered means-tested child benefit	- new child care benefit either incompatible or included in the means-test of *family bonus*
Health check bonus	- lump-sum means-tested benefit for new born children	- abolished
Small children benefit	- means-tested benefit for parents of 0 aged children not receiving parental leave benefit	- abolished

Figure 2 illustrates Austrian policies using three synthetic family types: a lone parent with a child aged 1; a one-earner couple with two children aged 7 and 1 and the same couple with two children aged 7 and 4. This gives an indication of the relative size or each policy element and how it is targeted by parental income. The universal benefits operate at a relatively generous level regardless of income. For one-earner couples and lone parents not engaged significantly in paid work, a high level of support for those with young children through the child care benefit is also evident. This does not operate once the child reaches their fourth birthday nor if the parent(s) are all fully active in the labour market. So, while not income-tested as such, allowing some high-income families to be entitled, the generous system is “conditional” rather than universal. Figure 2 also shows that the greater generosity of 2003 family-related policies to lower income families with young children has shifted a considerable part of the social expenditure from general social assistance to specific support for families with children. Nevertheless, social assistance is shown as still having a role to play for low income families with older children

Figure 2. Austria: 1998 and 2003 policies for two types of family, 2003 prices



Notes: The first family type consists of a 41 year-old, employed single mother. The second family type consists of a couple with a 41 year-old employed husband and a 41 year-old non-working wife. In both cases, individual original income is computed as the product of multiplying a fixed hourly wage (9.23 euro per hour) times an increasing number of working hours. All families are assumed to be tenants paying a rent of 400 euro per month. The amounts of the 1998 benefits where updated to 2003 levels using Eurostat's harmonised consumer price indices (8.04 percent in the case of Austria). Shaded areas represent policies that are not uniquely targeted to families with children and that are not "swapped" to other countries in section 5.
Acronyms: FA: family allowance; **CTC**: child tax credit; **LPTC**: lone parent tax credit; **CCB**: childcare benefit; **FB:** family bonus; **SUP**: parental leave/childcare supplement; **SA:** social assistance benefit;
Source: EUROMOD

2.2 Spain

In contrast to Austria, Spain has one of the least generous systems to support children in the European Union. In Bradshaw and Finch (2002), the Spanish 'child benefit package' is negative: in average housing costs and charges for services exceed the values of tax and cash benefits for children. According to the same study, only Greece, the Netherlands and Japan are less generous than Spain. As already noted, Table 2 indicates that the Spanish expenditure on family and children social benefits as a percentage of GDP (0.5%) is by far the lowest in the European Union. The expenditure level in Italy, the

second lowest in the EU-15, is double that of Spain. Support for families with children is mainly provided through tax concessions and a means-tested child benefit. Recent reforms have reinforced this structure by considerably increasing the size of the tax concessions.

In 1998, families with 'children' under 30 years of age were entitled to a non-refundable *child tax credit* ('deducción de cuota por hijo'). Only taxpayers whose tax liability was greater or equal to the tax credit could fully benefit from it. The amount per child of this tax credit increased with the number of children and was the same for all age groups. Single parents with children aged under 18 could also benefit from *joint taxation* ('declaración conjunta'). Until 1998, the tax schedule's exemption limit and income brackets were larger under joint taxation than under individual taxation. Hence, one-earner families paid considerably less tax under joint taxation.

Low-income families with children under 18 were entitled to a means-tested child benefit ('prestación por hijo a cargo').

The 2003 policies reflect the changes introduced with the 1999 and 2003 income tax reforms. The *child tax credit* was replaced by a more generous *child tax allowance* ('mínimo por descendientes') for 'children' under 25 years of age. The amount per child of this tax allowance increases with the number of children and is supplemented for children aged under 3. In 2003, a *working mother refundable tax credit* ('deducción por maternidad') was introduced for working women with children aged under 3. This tax credit is paid as a fixed rate per child aged under 3 and cannot exceed the social insurance contributions paid by the working mother.

Single parents are still allowed to use the *joint tax* if their children are aged under 18. However, after 1999, the tax schedule under individual and joint taxation is the same. The difference is that under joint taxation single parents (and couples) benefit from an additional tax allowance ('mínimo personal por declaración conjunta').

The *means-tested child benefit was uprated* well above the level of inflation due to a 35 percent rise in the year 2000 (it has not been updated since then). On the other hand, the benefit's income limit has remained constant in real terms.

Finally, since 2001 there are two new benefits: a lump sum means-tested *benefit for the birth of a third or successive child* ('prestación por el nacimiento de tercer o sucesivos hijos'), and a lump sum *benefit for multiple births* ('prestación por parto múltiple').

Table 5 summarizes the support for families with children in Spain in 1998 and 2003.[8]

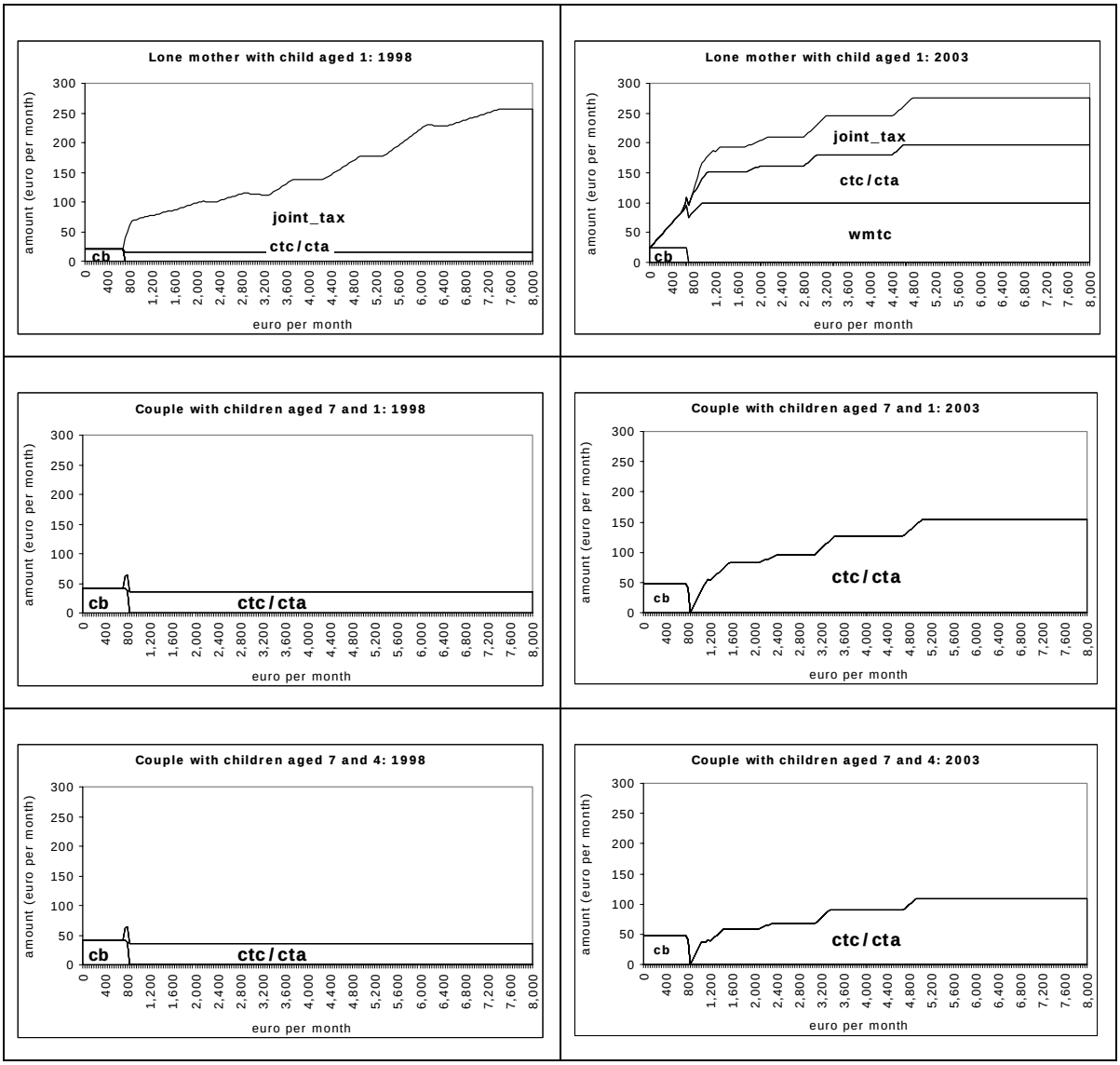
Table 5. Spain: Support to families with children, 1998 and 2003

	1998	Changes between 1998 and 2003
Child tax credit	- Non refundable tax credit - amount per child increased with the number of children	- replaced by child tax allowance
Single parent joint taxation	- tax schedule with larger exemption limit and brackets	- tax schedule is replaced by a tax allowance
Child tax allowance		- non refundable tax allowance - amount per child increases with the number of children and for children under 3
Working mother refundable tax credit		- refundable tax credit for working women with children under 3
Means-tested child benefit	- child benefit for low income families	- amount updated (once) above inflation
Lump sum one-off means-tested benefit for the birth of third child		- lump sum benefit for low income families with a newborn third child
Lump sum benefit for multiple birth		- lump sum benefit for families with two or more newborn children

Figure 3 clearly reflects the low level of expenditure on family support in Spain. While in Austria a low-income on-earner couple with two children would receive almost 1,000 euro per month, in Spain the same family would receive 50 euro. The two graphs at the bottom of Figure 3 also show that higher income families are the main gainers from replacing tax credit by tax allowances. Finally, we can see that lower income working mothers do not fully benefit from the working mother tax credit as their social contributions are not large enough.

[8] Due to lack of data on Spanish regions, regional policies to support families with children in Spain are not included here.

Figure 3. Spain: 1998 and 2003 policies for two types of family, 2003 prices



Notes: The first family type consists of a 41 year-old, employed single mother. The second family type consists of a couple with a 41 year-old employed husband and a 41 year-old non-working wife. In both cases, individual original income is computed as the product of multiplying a fixed hourly wage (9.23 euro per hour) times an increasing number of working hours. All families are assumed to be tenants paying a rent of 400 euro per month. The amounts of the 1998 benefits where updated to 2003 levels using Eurostat's harmonised consumer price indices (16.2 percent in Spain). Shaded areas represent policies that are not uniquely targeted on families with children and that are not swapped to other countries in section 5 (there are no such policies for Spain).
Acronyms: cb: means-tested child benefit; **wmtc**: working mother tax credit; **ctc/cta**: child tax credit/allowance; **joint_tax**: tax relief due to joint taxation
Source: EUROMOD

2.3 United Kingdom

When the Labour Party came to power in 1997, one in five children lived in a household where no one was in paid work and one in three was in poverty in the UK (Gregg et al, 1999). As result, tackling child poverty was a major goal for the new government. Using 1998-1999 as baseline, the government pledged a 25 percent reduction in child poverty by 2004-2005, 50 percent by 2010 and elimination of child poverty by 2020 (Blair, 1999). In order to achieve that, the British government has substantially reformed the

support for families with children. Although there has been a universal child benefit since 1976, the British system has been mainly characterised for being targeted on children living in lower-income families. Recent reforms have maintained and even reinforced income targeting. Although giving a stronger emphasis on in-work benefits these too are family income-tested, having the effect of extending means-testing further up the income distribution. The UK has a standard definition of dependent children. All child-targeted polices in the UK consider as children individuals under 16 years of age or under 19 if in full-time non-advanced education.

In 1998, *child benefit* was a universal social benefit paid for each child in the family. The amount per child was higher for the first child and there was a complement for lone parent families.

Low income families with children and with at least one parent working at least 16 hours per week could also apply for *family credit*. The amount of this means-tested benefit increased with the number and age of children. Parents working at least 30 hours a week received an additional supplement.

Low income parents not working 16 hours per week or more were entitled to a complement to their *income support/jobseeker's allowance* payment. The amount per child of this complement increased with the age of children. The complement was also higher for the first child and for lone parent families.

The means-tested *housing benefit* (HB) and *council tax benefit* (CTB) were also higher for families with children. The complement per child was higher for the first child and also increased with the age of children. Lone parent families received an additional complement.

Between 1999 and 2003 the British government has been quite active introducing reforms and, later, re-reforming them. Our analysis compares the policies in 1998 and 2003, so the changes performed and then changed again in between are not commented here.[9]

In 2003, the child benefit was 3 percent higher in real terms than in 1998. The complement for the first child increased more (about 9%), while the complement for lone parent families was eliminated.

9 For details about the reforms carried out after 1998 and before 2003 see Piachaud and Sutherland (2000) and Brewer et al (2001).

The *family credit* and the complement for *income support/jobseeker's allowance* were replaced by a *child tax credit* and a *working tax credit.*[10] One the one hand, this reform splits the family support and the 'make work pay' parts of *family credit* into two. On the other, it consolidates previously separated policies to support families with children into one. Furthermore, it extends the in-work benefit to people without children.

The *child tax credit* consists of two parts: a family and a child element. The family element is a fixed amount[11] paid for families with children. This amount is tapered away above a quite generous threshold. The child element is paid as a fixed amount per child (higher for disabled children) that is tapered away above a considerably lower income threshold. According to Brewer (2003), around 90 percent of families with children would be entitled to the family element, and around 50 percent to the child element.

The *working tax credit* is a means-tested in-work benefit for families with children with at least one parent working at least 16 hours a week, and to individuals/couples without children working at least 30 hours a week. There is a basic amount for single people without children and another substantially higher for lone parents and couples with or without children. These are complemented for those working more than 30 hours per week, disabled, or returning to work over 50. Families with children where all adults are working can also apply for a refund for part of their childcare costs.

The basic premia per child in *housing benefit* and *council tax benefit* were updated by a rate considerably more than the inflation rate in the period. The complements for younger children were increased so that the amount per child no longer varies with the age of children. Finally, the supplement for the first child was increased and the complement for lone parent families was abolished.

Table 6 summarizes the support to families with children in the UK in 1998 and 2003.

10 In fact, the family credit was replaced in 1999 by the working family tax credit. In 2001, a children's tax credit and a childcare tax credit were also introduced. In 2003, these tax credits were replaced by the child tax credit and the working tax credit.

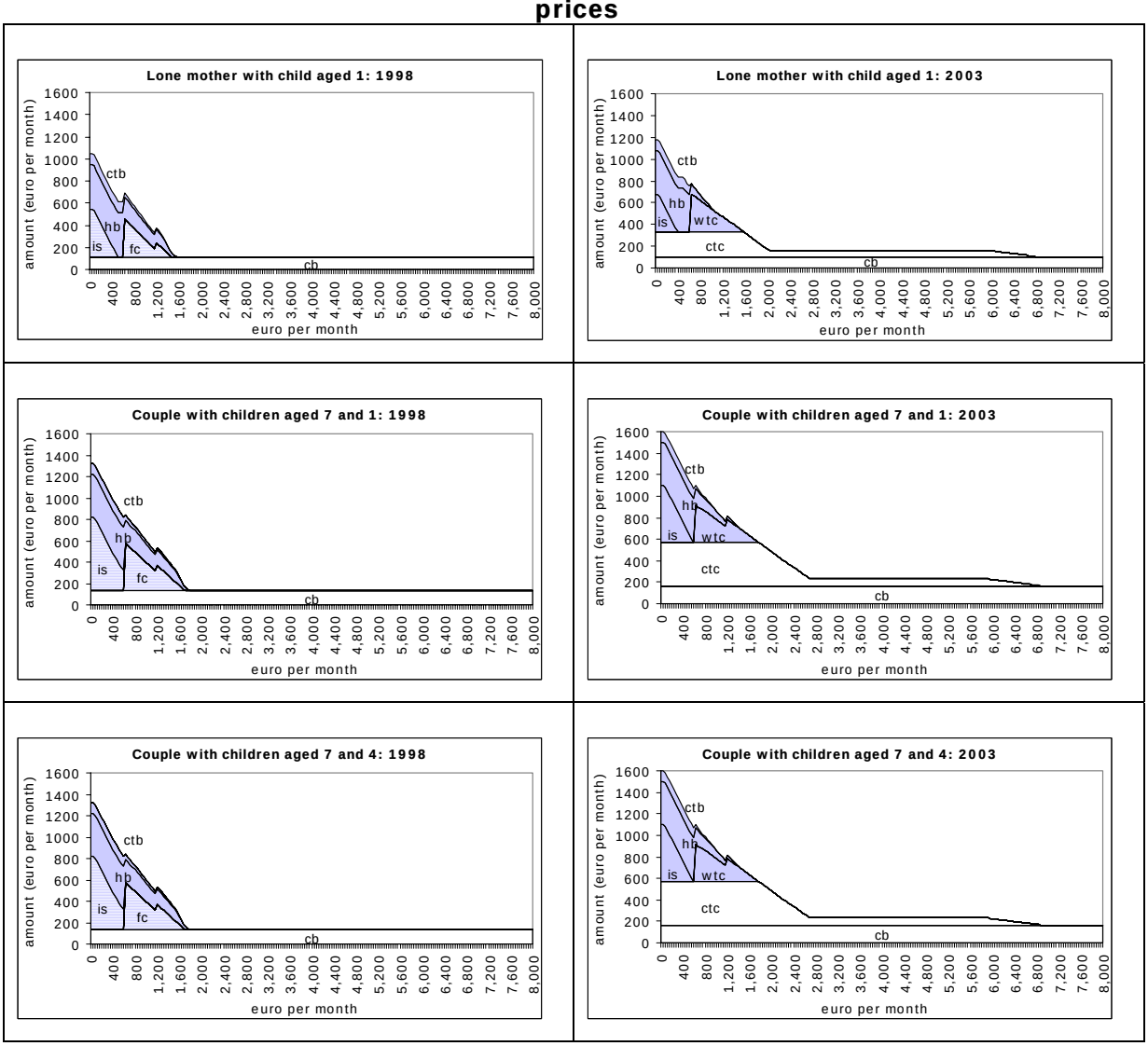
11 This amount is doubled in the case of a newborn child.

Table 6. United Kingdom: Support to families with children, 1998 and 2003

	1998	Changes between 1998 and 2003
Child benefit	- Universal child benefit - Higher amount for first child and lone parent families	- Benefit increased twice as much as the inflation rate. - Complement for first child increased by 40% - Complement for lone parent families is eliminated
Family credit	- Means-tested benefit for parents working more than 16 hours per week	- Eliminated
Income support/JSA	- Complement for children - Rate per child increased with age and higher for first child	- Child complement eliminated
Child tax credit		- Means-tested benefit for families with children - Amount is the sum of a fixed rate per family (family element) and a fixed rate per child (child element) - Each element is tapered at different income thresholds and with different withdrawal rates
Working tax credit		- Means-tested in-work benefit - Hours condition for parents is lower - The basic amount is higher for lone parents and couples with or without children - Families with children where all parents work are entitled to a refund for childcare costs
Housing benefit and Council tax benefit	- Means-tested benefits complemented for the presence of children - The complement increased with age of children - Additional complements for first child and lone parents	- Updated above the inflation rate - The complement is the same for all children's ages - Complement for lone parents is eliminated
Additions to some insurance benefits	- Child additions to some adult benefits	- Child additions eliminated

Figure 4 illustrates the importance of means testing and how recent reforms have considerably increased the generosity of policies to support families with children in the UK. Although this figure is certainly more like Figure 2 (the Austrian system) than Figure 3 (the Spanish system), one can see the greater emphasis on means-tested benefits in the UK. The comparison between 1998 and 2003 shows how the child tax credit has consolidated and increased the support to lower-income families, extended means-tested support higher up the income scale, and also introduced an element of "affluence testing" at high levels of income. The systems do not distinguish by the ages of children (at least for the ages shown in Figure 4) and are very similar for lone parents and couples: the lone parent family receives less than the example couples because she has fewer children.

Figure 4. United Kingdom: 1998 and 2003 policies for two types of family, 2003 prices



Notes: The first family type consists of a 41 year-old, employed single mother. The second family type consists of a couple with a 41 year-old employed husband and a 41 year-old non-working wife. In both cases, individual original income is computed as the product of multiplying a fixed hourly wage (9.23 euro per hour) times an increasing number of working hours. All families are assumed to be tenants paying a rent of 400 euro per month and 100 euro per month for council tax. The amounts of the 1998 benefits where updated to 2003 levels using Eurostat's harmonised consumer price indices (6.19 percent in the UK). Shaded areas represent policies that are not uniquely targeted on families with children and that are not "swapped" to other countries in section 5. Striped areas represent 1998 policies that were clearly targeted on families with children but that also had another social protection function (social assistance in the case of IS and work incentive in the case of FC).
Acronyms: cb: child benefit; **fc**: family credit; **ctc**: child tax credit; **wtc**: working tax credit; **is:** income support; **hb:** housing benefit; **ctb:** council tax benefit.
Source: EUROMOD

3 Method, Data, Assumptions and Definitions

This paper makes use of the static tax-benefit microsimulation model EUROMOD.[12] Tax-benefit models simulate in detail each component of the tax-benefit system on each

12 See Immervoll et al. (1999) and Sutherland (2000) for general descriptions. Sutherland (2001) provides a description and discussion of technical issues.

individual/household from a representative set of micro-data, usually derived from surveys. They calculate disposable income as the sum of elements of gross original income taken (or imputed) from the original data combined with elements of income – taxes and transfers - that are simulated by the model. They can be used to ask 'what if' questions about policy change. EUROMOD calculates taxes and transfers in detail and in a comparable way for all 15 countries that made up the European Union prior to the enlargement of May 2004.

The input dataset for Austria used here is an Austrian version of the ECHP collected in 1999. In the case of Spain, the dataset is the Eurostat version of the ECHP collected in 2000. The UK's input dataset is the Family Expenditure Survey collected in 2000/1.[13] The choice of dataset is based on national judgement of the most suitable dataset that is available for scientific research. The reference time period for income variables in the UK dataset is the current month whereas for Austria and Spain it is the previous year. Throughout we consider as if all policies (original and simulated) were implemented on June 30th 2003.[14] The original incomes are updated to June 30th 2003 by indexing each income component by appropriate growth factors, based on actual changes over the relevant period.[15] No adjustment is made for changes in population composition.

Section 4 compares the effects of the 1998 and the 2003 tax-benefit systems for the three countries. The 1998 tax-benefit system is simulated as if those policies effective in 1998 were still operating in 2003. In order to maintain their real value over time, all monetary amounts were updated to 2003 levels using Eurostat's Harmonised Indices of Consumer Prices (HICP).

In Section 5, 2003 child-related policies are swapped between countries. All EUROMOD simulated policies (including tax concessions) that are targeted at children in country A are eliminated and replaced by the child-related policies of countries B and C, and vice-versa.[16] Only policies strictly targeted at children are swapped between countries (a sub-

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13 We are grateful for access to these data to the Austrian Interdisciplinary Centre for Comparative Research in the Social Sciences; to Eurostat and to the UK Office for National Statistics (ONS) (access provided through the Data Archive). Material from the FES is Crown Copyright and is used by permission. Neither the ONS nor the Data Archive bear any responsibility for the analysis or interpretation of the data reported here. An equivalent disclaimer applies for the other two data sources and their respective providers cited in this acknowledgement.

14 It is necessary to specify a precise date because the timing within the year of regular uprating and other adjustments to tax-transfer systems varies across countries.

15 This process is documented in EUROMOD Country Reports. See http://www.iser.essex.ac.uk/msu/emod/countries

16 Some child-related policies are not simulated by EUROMOD mainly due to lack of data. In all three countries this applies to non-cash transfers, indirect taxes and child disability benefits. In Spain, child benefits and child tax credits administered by regional governments are also not included in the simulations because the regional disaggregation level in the ECHP is incompatible with that for regional governments.

set of those shown in Tables 4-6). Policies that have other purposes and that involve complements for children (e.g. the UK housing benefit) are not included in the swap. This is because it is unclear how to implement them in a system with a different structure. For example, how would the child additions to the UK housing benefit be implemented in a country such as Spain where there is no equivalent to housing benefit?

Given that the objective of these simulations is to learn about the impact of different policy structures rather than the expenditure level, all reforms are budget neutral. Hence, the cost of implementing the policies from country B in country A is the same as the cost of current policies in country A. The way this is done is first, the income thresholds of means-tested benefits or tax credits are set relative to the countries' median income.[17] Then all the remaining monetary parameters of "borrowed" policies are scaled up or down by a common adjustment index such that budget neutrality is achieved. The reason for treating income thresholds differently from the size of payments is that these have the function of determining where in the income distribution a policy takes effect, rather than the size of the effect. Child tax allowances are also scaled up/down by this scaling index, but no swap or adjustment is made to the tax schedule or the tax base.

Our measure of the contribution of each policy (as well as its impact on disposable income) is measured as the difference between the amount under the existing system and the amount obtained by "switching off" (or setting to zero) the part of policy that is targeted on children. Policies or elements of policies that are not targeted at children, according to our common definition remain in place. Following the United Nations Convention on the Rights of the Child, our definition of children is people aged under 18 (i.e. aged 0-17).[18] We generally assume that income is shared within the household such that household disposable income can be used to indicate the economic well-being of each individual within the household (the 'within household' incidence issue is not considered). The individual is taken as the unit of analysis. So our focus is generally on each child, rather than on parents or families containing children.

Household disposable income is defined as original income added up over each household member plus between-household transfers (e.g. maintenance and alimony), minus taxes (income tax, social contributions and other direct personal taxes) plus cash transfers.

17 The threshold of country A's benefit simulated in country B is $tB = [tA * (mB / mA)]$, where ti is the threshold and mi the median equivalised household disposable income in country i.

18 Note that this diverges from the definition of a child used in the tax and transfer rules of our analysed countries (as would any common definition). Hence, our analysis does not consider part of the expenditure on these policies as support to children.

Cash transfers are assumed to include public pensions in payment but do not include regulated private pensions that may substitute for these. Non-cash benefits are not included. Household disposable incomes are equivalised using the modified OECD equivalence scale, as recommended by Eurostat.[19]

Poverty is defined as living in a household with equivalised household disposable income below 60% of the median, where the median is calculated across individuals.

We do not explicitly model non-take up of benefits, tax avoidance or evasion. Thus it is assumed that the legal rules apply and that the costs of compliance are zero. This can result in the over-estimation of taxes and benefits.[20] More generally we make the strong assumption that individual behaviour such as benefit take-up, tax evasion and other relevant socio-economic decisions (e.g., labour supply, family formation) do not change as a result of the policy changes that are modelled. Correcting for such departures from the pure arithmetical calculations is not straightforward or simple to do in a way that is comparable across countries. These behavioural responses depend on many factors such as the form and administration of each tax or transfer, labour market rules and characteristics, social values, etc. and are therefore nationally-specific.

4 The impact of actual reforms 1998-2003

As outlined above, Austrian, Spanish and UK child policies were subject to substantial changes within the period 1998 to 2003. This section aims to illustrate the scale and structure of these changes and to asses their impact on the distribution of household incomes and child poverty. We base this illustration on the question “What would have happened if no real changes in taxes and benefits had been implemented between 1998 and 2003?”. This is achieved by applying the 1998 tax benefit rules to the situation as it existed in 2003.[21]

To give an initial impression of the effects of all the tax and benefit policy changes implemented between 1998 and 2003, Table 7 shows the impact on child poverty rates using three different proportions of the median as poverty thresholds. [22] In each case it is the median under 2003 policies that is the reference point. So the question Table 7

19 This assumes single person=1; additional people aged 14+ = 0.5; additional people aged under 14 = 0.3.

20 It can also result in the under-estimation of poverty rates although this depends on the relationship between the level of income offered by the benefits and the poverty line (potential claimants may be poor whether or not they receive the benefits to which they are entitled).

21 1998 tax benefit parameters are updated to 2003 monetary values by applying the Harmonised Indices of Consumer Prices (HICPs) published by Eurostat. These are 8.0% for Austria, 16.2% for Spain and 6.2% for the UK.

22 Here and throughout EUROMOD estimates were obtained using version 31A.

addresses is "How much lower are child poverty rates under 2003 policies than they would have been under the policies of 1998?"

Table 7: Child poverty rates, 1998 and 2003 tax benefit rules

	AUSTRIA			SPAIN			UK		
	1998	2003	change	1998	2003	change	1998	2003	change
child poverty rate, 50% median pov.-line	4.3%	3.7%	-0.6pp	17.6%	16.3%	-1.2pp	21.3%	6.2%	-15.1pp
child poverty rate, 60% median pov.-line	12.3%	8.8%	-3.5pp	26.5%	25.3%	-1.1pp	32.1%	19.7%	-12.4pp
child poverty rate, 70% median pov.-line	23.6%	18.4%	-5.1pp	34.5%	32.3%	-2.2pp	40.8%	32.4%	-8.4pp
overall poverty rate, 60% median pov.-line	11.0%	9.5%	-1.5pp	20.1%	19.1%	-1.1pp	24.1%	16.2%	-7.8pp

Source: Euromod

In Austria the reforms had a considerable impact on child poverty. The child poverty rate using the 60% threshold is 8.8% in 2003 rather than 12.3% under 1998 policies, and falls below the overall poverty rate. The reduction is however slightly less pronounced using the 50% threshold. As might be expected, considering the structure of additional expenditure, Spanish child policy reforms appear to be the least effective. The child poverty rate decreases by only 1.1 percentage points using the 60% threshold, and remains at a high level of 25.3%. Reduction in child poverty rates is most impressive in the UK. The child poverty rate decreases by 12.4 percentage points to 19.7% (though this is still very high compared with Austria), also narrowing the gap with the overall poverty rate. The decrease is even more pronounced using the 50% threshold.

These estimates take account of all changes, including those that are not targeted particularly on children (such as changes in the income tax schedules or to social contributions). To give an impression of the scale of the child-targeted changes, Table 8 shows the increase in total net child targeted spending resulting from the changes set out in Tables 4, 5 and 6.

Table 8: Child targeted spending, 1998 and 2003 tax benefit rules, 2003 prices

	AUSTRIA			SPAIN			UK		
	1998	*2003*	*change*	*1998*	*2003*	*change*	*1998*	*2003*	*change*
per child spending (monthly, €)	169	220	30.6%	13	33	150.3%	102	174	71.1%
total spending in % of HDI	3.6%	4.7%	1.1pp	0.4%	1.0%	0.6pp	2.2%	3.6%	1.4pp

Source: Euromod
Note: For the UK an exchange rate of €1 to £ 0.70295 is used (June 2003, source: http://www.x-rates.com)

In relative terms Spanish child targeted spending increased most, expenditure under 2003 policy rules amounts to one and a half times the expenditure under 1998 rules but at 2003 prices. However, although spending as a percentage of household disposable income was more than doubled, it remained at a relatively low level of one percent. UK

spending on children also rose by a remarkable 71%, increasing its share in household disposable income from 2.2% to 3.6%. Austrian expenditure which, in comparison with the other two countries, was already generous was further increased by one third, from 3.6% of household disposable income to 4.7%.

Figure 5 shows the distributional impact of child-targeted policy in terms of the average spending per child in each decile group of the all-household income distribution before and after the reforms.[23] Spending is shown in cash terms without making adjustments for between-country differences in purchasing power. Thus differences in level between countries should not be the focus of attention. Rather, it is the shape of the curves across income levels and how they change with policy regime that is of interest.[24] The Austrian system in 1998 had more or less the same effect on children at each level of household income, with a somewhat lower amount being spent on the lowest income children.[25] The Spanish system, while rather minimal from any perspective, favoured those on lower incomes to some extent. The UK system favoured children in low income households, spending about three times as much on children in the bottom decile group as those in the top group.

In Austria the increase in spending per child is relatively evenly spread over the income distribution, with a moderate concentration in the middle and lower-middle (deciles 2-7). More or less the same can be said for the UK, though interestingly the increase in per child spending in the bottom decile group is considerably less than the average for the bottom half of the UK distribution. The pattern of increase in Spain is striking. While the rise in per child spending in the two bottom decile groups is negligible, children in the 7th and 8th decile groups receive on average more then four times as much under the 2003 rules as under the 1998 rules and children in the top 20% of incomes more than ten times as much.

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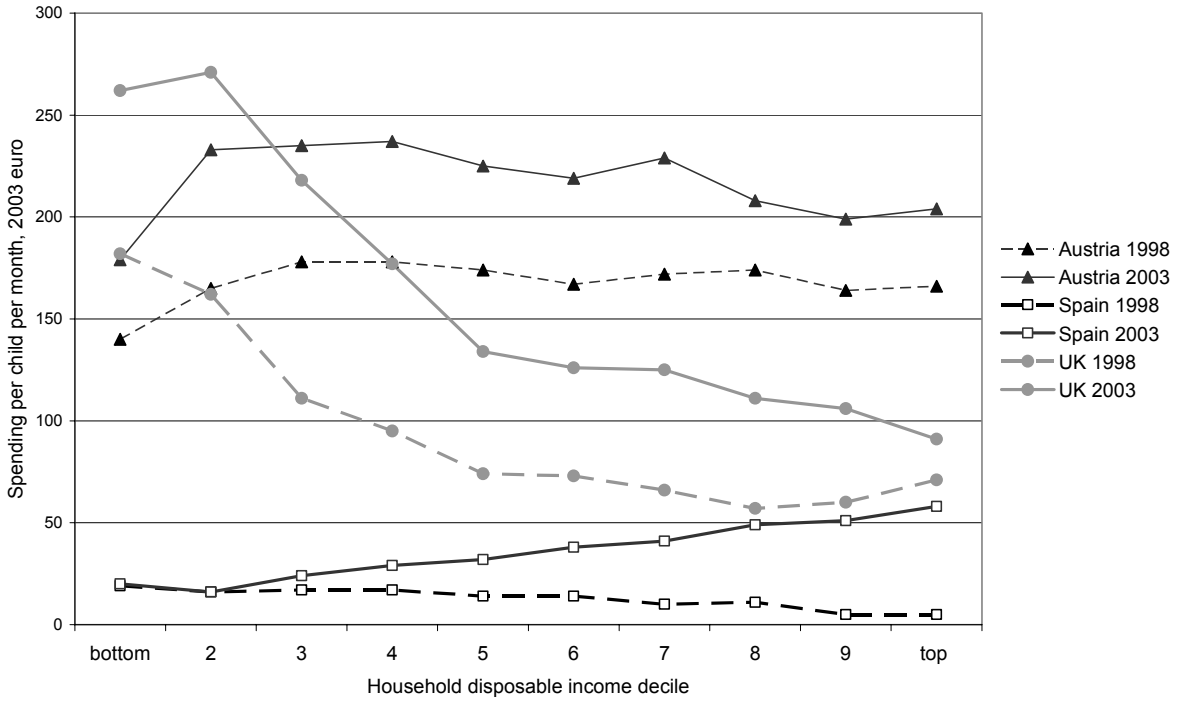
23 This is calculated by “switching off” the child-specific policies illustrated in Figures 2-4. To some extent the estimates of size of the child-targeted spending depend on the tax-benefit system in which the child-specific components are implemented. In the case of Austria general social assistance schemes operate to mitigate the “loss” of the child-specific components, under-estimating the size of gross child payments for social assistance recipients.

24 Income deciles are based on individualised equivalised household disposable income under 2003 policies.

25 This effect is mainly due to social assistance partly replacing child-specific payments at low levels of income. It is possible that this effect is over-estimated since social assistance receipt is based on calculated entitlement, without taking account of factors leading to non-take up.

Figure 5: Child-targeted spending by income group in Austria, Spain and the UK, 1998 and 2003 tax-benefit rules, 2003 prices



Source: Euromod
Note: Deciles are defined using incomes under 2003 policies.

5 The effects of the three systems in Austria, Spain and the United Kingdom

Apart from the structure of spending, a crucial issue is its level. Therefore, we begin with a comparison of the size of expenditure in the three countries in 2003. As shown in Table 9 the amounts spent vary considerably. Austria spends on average 220 € monthly per child. Once adjusted by differences in purchasing power, this is 22 percent more than the amount spent in the UK (£122, which is 174 € or US$ 198 PPP). Spain falls a long way short of the other two countries' level of expenditure, by spending only 33 € monthly per child.

Table 9: Scaling factors to achieve budget neutrality

	Austria	Spain	UK
Austrian child policies		0.15	0.73
Spanish child policies	10.60		7.21
UK child policies	1.42	0.25	
monthly average spending per child 2003 prices	**220 €**	**33 €**	**174 €**
monthly average spending per child 2003 prices adjusted by PPP	**US$ 242**	**US$ 44**	**US$ 198**

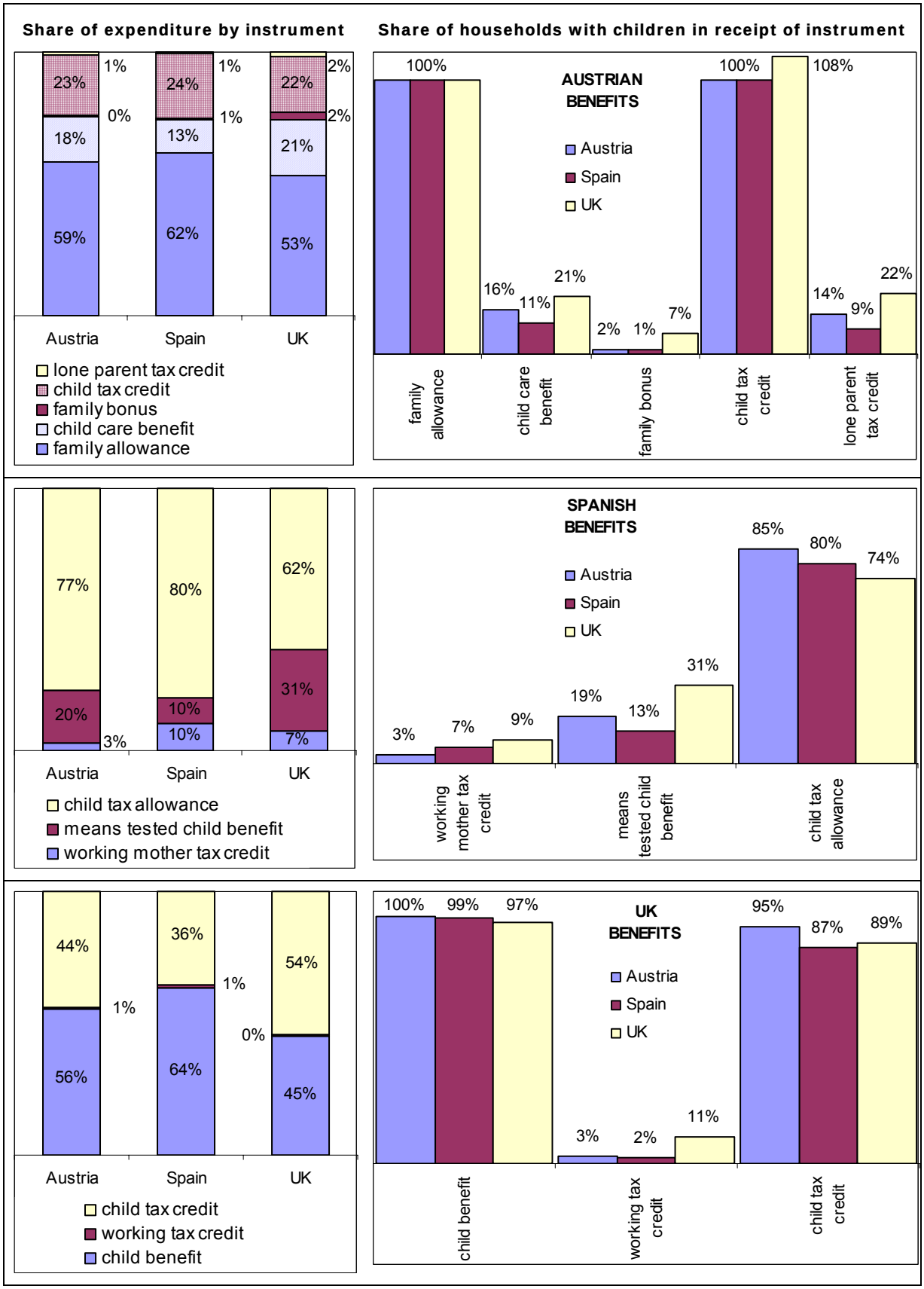
Source: Euromod
Note: For the UK an exchange rate of €1 to £ 0.70295 is used (June 2003, source: http://www.x-rates.com). The 2003 PPP index for Austria is 0.908, 0.742 for Spain, and 0.618 for the UK (source: OECD purchasing power adjustment factors for GDP, http:/www.oecd.org/std/ppp/)

Table 9 also shows the factors used to scale up or down the payments within the child policies in order to make them budget neutral.[26] To implement the Spanish and UK child targeted policies into the Austrian system basic amounts were increased tenfold in the case of Spain and increased by 42 percent in the case of UK. Austrian and UK child policies had to be scaled down considerably for implementation in Spain, in the case of the Austrian policies to less than 1/6, and in the case of UK policies, to a quarter. Finally, to implement the other two country's child policies in the UK, Austrian basic amounts were reduced by a quarter and Spanish amounts multiplied by seven. It is worth emphasising that there is not exact symmetry between the factors to be applied when exchanging systems, and that the budget-neutral scaling factors cannot be derived from the ratios of the spending per child in each national system. This is because the cost of implementing a particular system depends on the characteristics and circumstances of the children and their families: these are clearly different across countries. In addition, the cost depends to some extent on the way in which the child components interact with the rest of the national tax-benefit systems. So, for example, the value of the Spanish child tax allowances depends on the tax schedule into which they are introduced.

As explained above, not all the policy instruments that are affected by the presence of children are included in the "swapping" exercise. We concentrate on those whose stated aim is the support of children and Figure 6 shows the relative contribution of each of the policy instruments considered in the spending shown in Table 9, and the proportions of households with children who are in receipt of each policy instrument. The figure shows the effect of each system in turn, comparing the implementation in the three countries.

26 The factors used to scale the income thresholds based on median household disposable income are Austria (1.0000) Spain (0.6710) UK (1.0015)

Figure 6: The contribution of each policy instrument to child targeted spending



Source: Euromod

Among the Austrian instruments the two universal benefits, family allowance and the refundable child tax credit, make up three quarters or more of total spending when the Austrian system is implemented in all three countries. They are received by all households with children.[27] While the family bonus (targeted on the poor) and the lone parent tax credit are nearly negligible in size, the child care benefit is of considerable importance. This is targeted on young children whose parent(s) care for them rather than work. This benefit, as well as the lone parent credit and family bonus, play a larger role in the UK than they do in Austria. This is because there are a larger proportion of all children within the target groups for these benefits in the UK. They play a smaller role in Spain than in Austria because the scaling down to Spanish levels of spending makes them rather low in value and because there are fewer Spanish children in the target groups: lone parent families and/or with parents at home caring for them.

The most significant Spanish instrument is the child tax allowance. As only families paying (enough) income tax can (fully) claim this benefit a proportion of households with children do not receive it. This proportion is higher in Austria than Spain but lower in the UK, reflecting the extent to which parents are subject to income tax in the three countries. The Spanish means tested child benefit is quite important too, especially in the UK. Once the Spanish system has been scaled up to Austrian and UK levels of spending, larger proportions of households become eligible in these two countries than they are in Spain. The importance of the working mother tax credit depends on the extent to which mothers of young children are in paid employment in the three countries. The proportion of families who are eligible is highest in the UK, followed by Spain and then Austria.

Among UK instruments the universal child benefit and the means tested child tax credit account for the bulk of spending, while the contribution of the working tax credit to supporting children is very small.[28] While child benefit is universal, children aged 16 or more who have left secondary school are not covered. Thus the households with children aged under 18 are not quite all covered in Spain or the UK. The age conditions for the child tax credit are the same. Coverage rates appear rather high for a policy instrument that is described as a means-tested benefit. This is because a relatively small component is tested against income at a high level (“affluence testing”) removing eligibility to any

27 The Austrian child tax credit affects more than 100% of households with children in the UK. This is because the Austrian child tax credit can be received by people paying for maintenance for children living in other households. The UK data contains a variable that indicates such payments whereas the Austrian and Spanish data do not (otherwise, we would expect the percentage of households affected in these countries to also be somewhat greater than 100%).

28 In the UK only the additional components of WTC that make the scheme less restrictive for parents than others (related to the hours of work condition) are counted as being "child targeted". When implemented in the other countries without the remainder of the WTC, these components have a negligible effect, not least because the proportions of parents working part-time hours are much lower in Spain and Austria than in the UK.

benefit in only 11 per cent of cases in the UK. The proportion ineligible on grounds of high income is slightly smaller in Austria.[29] Most of the spending on child tax credit is targeted on families with low and low-middle incomes (see Figure 4). There are more qualifying families for this part in the UK than the other two countries and this is reflected in the lower share of spending for the tax credit in both Austria and Spain.

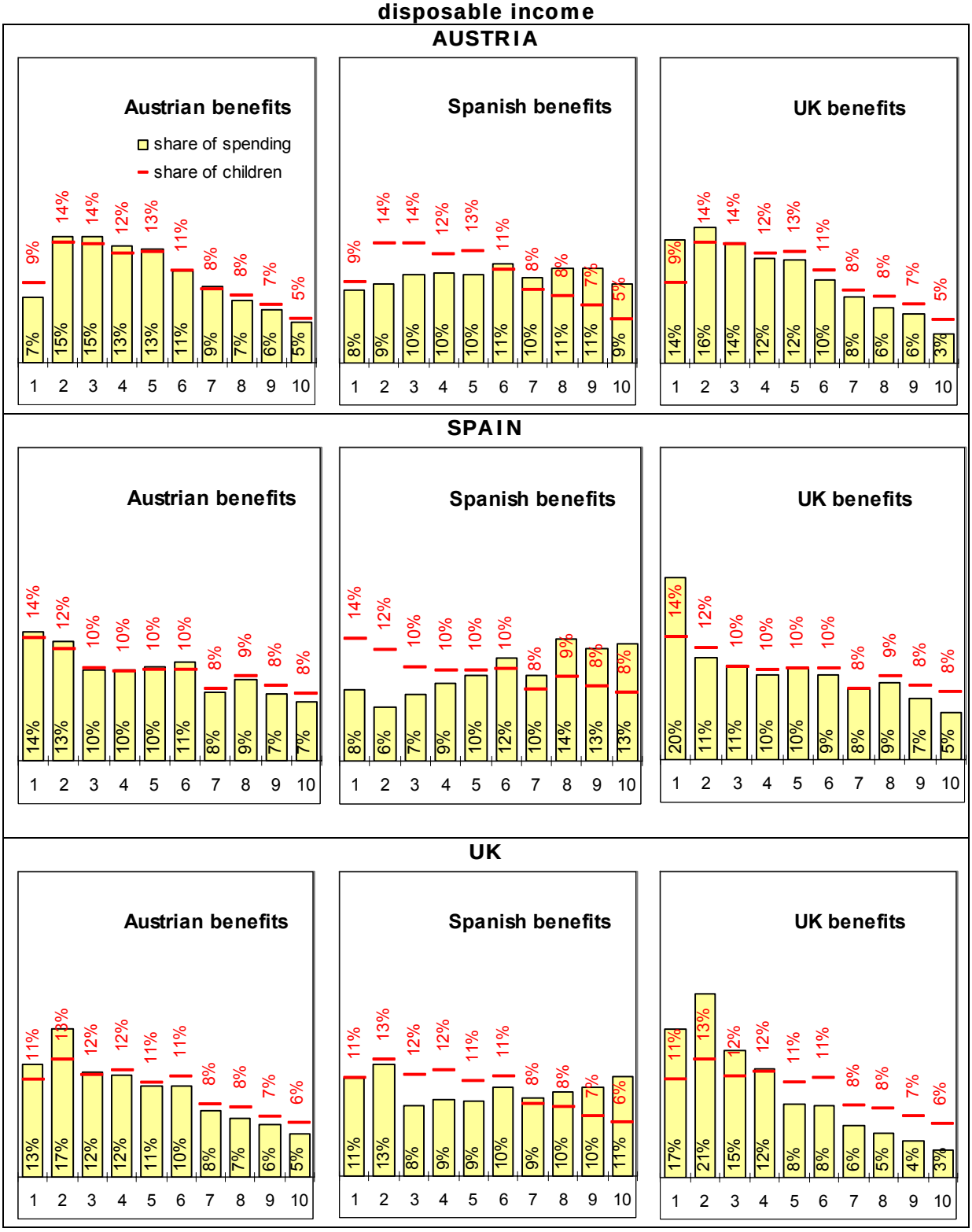
Figure 7 shows the distributional effect of the three systems applied within its country of origin, and applied to the other two countries. Each chart shows the share of child targeted spending by the level of household income. Households are grouped by decile of equivalised income under actual 2003 policies. The charts also show the share of children belonging to the income group.

The charts on the diagonal of Figure 7 show the effects of national systems implemented in their own country. The three pictures are consistent with the information shown for the 2003 systems in Figure 5. For Austria the share of spending in each decile group is remarkably close to the share of children in that group, but with a lower share of spending in the bottom decile group. This has a share of children that is low relative to the other two countries but still higher than the share of spending under the Austrian system. The Spanish picture shows disproportionate spending in the higher income groups. Children are more heavily concentrated in the lower income deciles than in the other two countries. In the UK spending is disproportionately on the lower- and lower-middle income children resulting in higher spending per child in these groups.

The Austrian system introduced into Spain and the UK also manages to achieve a distributional effect that matches quite closely the share of children in each income group. For a fully universal system this would be inevitable. The departures – for example the excess of spending over number of children shown for the second decile group in the UK – arise from the targeting of specific groups, such as young children, within the Austrian system. While in Austria only 7 percent of spending is received by children in the bottom decile group the system delivers 14 and 13 percent respectively to Spanish and British children at the bottom of their national distributions. It delivers far more to low income Spanish children than does the Spanish system, but less to British children in the bottom three deciles than does the UK system.

29 A plausible explanation for this is that while the threshold for affluence testing is set with reference to median incomes which are almost identical in UK and Austria, it is likely that a lower proportion of Austrian parents have very high taxable incomes than do parents in the UK, where earnings inequality is relatively high.

Figure 7: Three systems of child targeted spending by decile group of household disposable income



Source: Euromod
Note: "benefits" refers to both cash benefits and the value of tax concessions

As one might expect, the Spanish system delivers disproportionately to children in the higher deciles in both Austria and the UK. Although in Spain it fails to deliver to low income children this is not the case for children in the Austrian bottom decile group or for British children in the bottom two deciles: the shares of spending roughly match the

shares of children. This is because once the small parts of the Spanish system that target low incomes have been inflated to Austrian and UK levels of spending, they are generous enough to make a significant difference. Nevertheless, the UK system delivers more to these groups in both Austria and the UK, whereas the Austrian system delivers more to the bottom two deciles in the UK than in Austria. It is children in middle income groups in UK and Austria who lose out particularly from the Spanish system.

The UK structure of spending on children strongly favours the lower income groups – wherever it is implemented the share of expenditure received by children in households in the top 60% is less than their share of children. In contrast to the effect within the UK – where children in the bottom 30% benefit disproportionately - the main effect in Austria is concentrated in the bottom decile group and in Spain the only positive effect is in the bottom decile group. Also, while the UK system fails to deliver proportionately to children in the middle and top of the distribution in the UK, this is far less strongly the case when the system is implemented in either of the other two countries, with the exception of children in the top Spanish decile group.

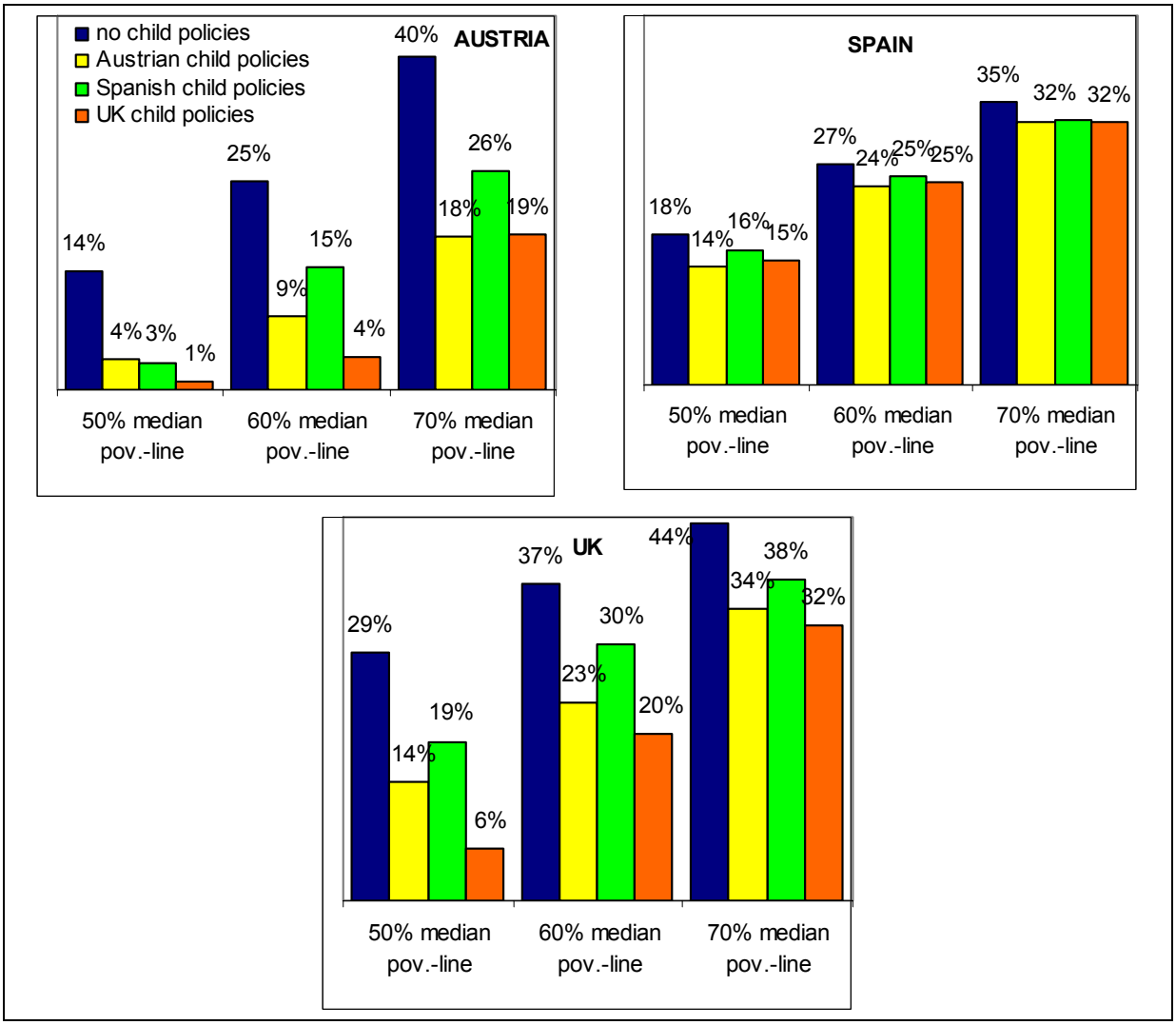
6 The effects of the three policy strategies on child poverty

This section assesses the relative success of the three approaches to meeting the goal of reducing child poverty. Figure 8 shows to what extent the three country's child policies are able to reduce child poverty rates compared with the (hypothetical) scenario without any child targeted spending. To give a more comprehensive picture the comparison is carried out using three levels of the poverty threshold: 50% of median income in the first group of bars, 60% in the second and 70% in the third.[30]

It is striking that while in Austria and UK all child policy strategies are able to reduce child poverty rates considerably (though to different extents), the reduction is very moderate in Spain. Austrian and UK policies are slightly more successful than Spain's own policies, with Austrian policies achieving most. But even Austrian policies only reduce the child poverty rate at the 60% threshold from 27% to 24%. Considering the average per child spending in the bottom income decile group amounts to €34 with the Austrian, €20 with the Spanish and €48 with the UK strategy, it is hardly surprising that keeping children out of poverty is not very successful under any of them.

30 The base for calculating the poverty line in all four scenarios is the (equivalised) median income under the actual 2003 system in each country.

Figure 8: Child poverty rates under three alternative child policy strategies



Source: Euromod

Even when scaled up to cost the same as existing Austrian or UK policies it is also clear that the Spanish approach is least able to reduce poverty rates. UK policies do most in terms of poverty reduction. When implemented in Austria, for example, the child poverty rate at the 50% threshold approaches zero and is still only 4% at the 60% threshold (compared with 9% under the Austrian system). However, the Austrian approach is also quite effective, especially when implemented in Austria itself. We might expect that the success of Austrian and UK policies to be more equal at the 70% than at the 50% threshold, given the emphasis of UK spending on families with low incomes. Indeed, some convergence can be observed, with Austrian policies achieving more than UK policies in Austria at this higher income threshold (although not in the UK).

Figure 8 clearly indicates the importance of the total amount spent. Apart from the Spanish case, where spending on children is obviously too low to give any approach much power, the importance of the level of spending is underlined by the fact that all

strategies achieve the greatest reduction in child poverty in Austria, where spending is 25 percent higher than in the UK and more than six times as high as in Spain. Even with Spanish policies the small parts of the system that are tailored to support the poor become quite effective in child poverty reduction when scaled up to Austrian (or UK) levels of spending.

7 Gainers and losers from alternative systems

As well as their effects across the income distribution, and particularly on poverty reduction, it is instructive to consider the balance between gainers and losers when incomes under the alternative systems are compared with those under the actual national systems. Table 10 shows the percentage of households with children who are better off under one or other of the two alternative sets of child policies than under the existing national systems.[31] The proportions gaining are shown for all households and by family type and number of children. Where a particular category contains substantially more than the average proportion of gainers it is shown with darker shading; where it contains substantially less, the shading is lighter.

Table 10: Percentages of households with children who are better off on "borrowed" child policies, by family type and number of children

	AUSTRIA			SPAIN			UK		
%	*Spanish benefits*	*UK benefits*	*% of hh with children*	*Austrian benefits*	*UK benefits*	*% of hh with children*	*Austrian benefits*	*Spanish benefits*	*% of hh with children*
all households with children	58.6	51.3	*100.0*	51.1	54.1	*100.0*	55.1	47.1	*100.0*
2 parents, both earning	66.0	43.0	*45.4*	33.6	38.1	*33.8*	**71.1**	**72.2**	*45.4*
2 parents, one earning	50.3	43.4	*37.2*	51.0	54.3	*50.6*	59.2	36.2	*23.6*
2 parents, no earner	**91.5**	**100.0**	*0.8*	**89.6**	**84.6**	*5.2*	34.7	7.5	*7.5*
1 parent, earning	51.9	**89.5**	*13.7*	**86.4**	**86.6**	*7.7*	24.7	39.6	*12.1*
1 parent, not earning	**72.9**	**87.6**	*2.9*	**98.5**	**98.5**	*2.6*	29.3	3.6	*11.4*
households with 1 child	**69.2**	**82.3**	*45.1*	53.6	**71.9**	*46.1*	36.9	48.9	*42.1*
households with 2 children	52.9	23.8	*42.6*	46.1	39.2	*41.8*	**73.0**	48.3	*39.5*
households with 3+ children	39.5	32.9	*12.3*	58.9	38.0	*12.1*	58.6	40.2	*18.3*

90.0 *more than 10 percentage points above "all households with children"*
10.0 *more than 10 percentage points below "all households with children"*
Source: Euromod

For Spain, when switching to either of the two other countries' child policies there is a high percentage of gainers among two groups who are particularly at risk of poverty: workless couples and lone parents. This is explained by the existing Spanish system offering little protection to low income families, underlined by the fact that more than two thirds of the group most likely to be well-off, two earner couples, lose. In Austria the

31 Any increase in income is counted as a "gain".

high percentage of gainers among lone parents, especially those not earning, may well indicate that Austrian benefits could do better in protecting this highly vulnerable group.[32] A large percentage of UK two earner couples would gain with Austrian or Spanish child policies in place, to the disadvantage of groups more likely to have low income. With the Spanish benefits nearly everyone would lose within the workless groups. This result again confirms the strong emphasis of UK child policies on low income families.

Austrian and Spanish one child families are likely to gain by implementing UK benefits, while UK one child families are more likely to lose with Austrian benefits in place. The higher rate for the first child within the UK benefits and credits provides a likely explanation. Table 11 shows similar information for children who are in households that gain, by the age of the child.

Table 11: Percentages of children who are in households that gain from "borrowed" child policies, by age of child

	AUSTRIA			SPAIN			UK		
%	*Spanish benefits*	*UK benefits*	*% of children*	*Austrian benefits*	*UK benefits*	*% of children*	*Austrian benefits*	*Spanish benefits*	*% of children*
all children	54.2	41.9	*100.0*	51.3	47.9	*100.0*	59.6	45.5	*100.0*
children aged 0 to 2	28.9	14.7	*10.9*	50.8	27.2	*9.6*	**84.2**	46.6	*15.7*
children aged 3 to 5	52.0	39.2	*15.9*	48.4	49.3	*12.5*	54.9	42.1	*16.0*
children aged 6 to 8	55.2	34.4	*17.6*	47.2	46.5	*16.2*	56.5	41.1	*17.7*
children aged 9 to 11	56.1	49.0	*17.7*	53.6	52.0	*20.6*	53.4	41.4	*17.3*
children aged 12 to 14	59.2	48.0	*18.9*	52.7	49.1	*19.6*	54.7	47.2	*17.6*
children aged 15 to 17	62.9	**54.3**	*18.9*	52.9	52.2	*21.6*	55.4	**55.8**	*15.7*

90.0 *more than 10 percentage points above "all households with children"*
10.0 *more than 10 percentage points below "all households with children"*
Source: Euromod

Many young Austrian children would lose with either of the other country's child policies. The same is true for young Spanish children with UK benefits in place. On the other hand a large proportion of children aged under three in UK would be better off with Austrian benefits. This reflects the effects of especially the Austrian but also the Spanish benefits targeted at very young children.

8 Concluding remarks

Our aim has been to explore which aspects of the design of support for children matters most. To do this we have focused on three countries with substantially different

32 In Austria the workless couple group is very small, making unreliable an interpretation based on just a few (nine) sample cases.

approaches, each of have increased child targeted spending in the recent past: Austria, Spain and the UK.

The investigation of the 2003 structure of cash benefits and tax expenditures targeted specifically on children confirmed our expectations about the characteristics of the three country's strategies: Austria makes use of relatively generous universal benefits, with targeting restricted to especially vulnerable population groups. Thus child targeted spending is rather evenly distributed by household income. Spanish child policy relies to a large extent on tax concessions. Correspondingly we found a clearly "pro rich" distribution of Spanish expenditure on children, with a very modest addition to the level spending on the very poor. The UK puts much more weight on means testing (and "affluence testing") than the other two countries. This is reflected in our results by showing higher spending on children in the lower income groups which is not confined to the very poorest but affects children in the bottom third of the household income distribution.

The level of child targeted spending also varies across the countries considered. Austria spends on average 220€ per month per child. This is 26 percent more than the amount spent in the UK (174€), or 22 percent once adjusted for purchasing power. The Spanish system falls far short of the other countries' level of expenditure, by spending only 33 € monthly per child.

There are some conclusions in relation to child poverty that we can draw about the three systems of support for children that apply regardless of which country they are implemented in. On vertical equity grounds, UK policies are the most successful at reducing child poverty, in all three countries and using a range of proportions of the median as poverty thresholds. The Spanish system is the least successful, even when it is scaled up. There is a crucial role for an adequate level of spending, regardless of its structure. In Spain the level spending is too low to give any approach much power, whereas all strategies achieved the best results in Austria (in the sense of both the lowest child poverty rates and the greatest proportional reduction in poverty rates relative to the "before child policies" scenario). Even with Spanish policies the parts tailored to support the poor reduce child poverty effectively, once they are paid at a sufficient level.

In terms of horizontal equity, the Austrian system generates the highest redistribution from childless individuals to families with children and guarantees the right to a similar level of protection for all children regardless their parent's income position in all countries. On the other hand, with both a low expenditure level and a distribution biased

towards higher income families, the Spanish policies can hardly achieve any equity objective.

There are also factors that are different across countries that result in differential effects from the same system of child policies. Some of these differences relate to the circumstances of children and their families. So, for example, a benefit targeted on working mothers of young children (as in the Spanish system) will cost less to implement in a country where few such mothers are in work (as in Austria). This results in the budget-neutral payment being higher for those Austrian mothers who do in fact qualify. Some of the differences relate to the nature of the tax-benefit system into which the borrowed policies are implemented. The value of the Spanish child tax allowances depends on the tax schedule so in a country like the UK where the progression in the schedule is low, the value of the allowance does not increase with income as much as it does in Spain.

There are some particular aspects of national policies which seem to be effective in one or both of the other two countries – suggesting directions for actual reform in these countries. For example, the way UK policies impact on lone parent families and one-child families in both Austria and Spain seems particularly positive (Table 10). Both Austria and Spain have explicit policies for young children but it is only the Austrian policies – which support parents who take leave from work to look after their own children - that have a net positive impact on children in the UK. The Spanish approach is to support mothers of young children who do work. Both the Spanish and Austrian systems are better at supporting children in high and middle income households than the UK system.

Comparing the effectiveness of the Austrian and UK systems in reducing child poverty is of particular interest. While the means-tested system is inevitably more effective at targeting those at risk of poverty, the Austrian system, even when scaled down to be budget-neutral, is only slightly less effective in the UK at the 60% and 70% median poverty thresholds than the UK system (a difference of 2 and 3 percentage points on the child poverty rate, respectively). It is also worth noting that our calculation of means-tested benefit entitlements assumes full take-up in spite of the fact that there is evidence that these benefits may not always be claimed due to stigma, costs of claiming or lack of information. Thus we do not make comparisons on a “level playing field” and any calculations which did take non-take-up into account would narrow the gap between the poverty reduction achievements of the Austrian system and those of the UK system.[33]

33 Modelling of the take-up of benefits “borrowed” from another system would need to make assumptions about the administration of the benefit and the culture of claiming within the specific national context. This would be challenging.

Furthermore, our investigation does not take behavioural reactions into account. These might be important in two ways. On the one hand, introduction of an alternative system may result in some second round behavioural adjustment that is not captured in our calculations. On the other hand, and more importantly for understanding the differential effects of the same policies in different national contexts, the existing patterns of behaviour and income receipt in each case have been influenced by the prevailing tax and benefit system. As described in the introduction to this paper, this is one among several inter-linked determinants of the economic position of children. Indeed it is well known that income targeting can have adverse effects on work incentives. The high poverty rates before child targeted spending of UK children shown in Figure 8 may well be influenced by this. Long term expectations about the role of benefits in supporting children may also have an effect. The pre-child spending poverty rates for Spain are relatively low suggesting that Spanish parents are more likely than their British counterparts to live in households where they are protected from poverty by the incomes of others, or indeed that they must postpone parenthood until their own incomes are sufficient to support their children.

We have focussed on the effects of the systems of support for children on child poverty rates, on the groups gaining and losing from alternative systems, and on the net effects across the whole income distribution. There are many other aspects that might be considered, including the effect on parental work incentives of the alternative systems, the role of benefits not specifically targeted on children but received by parents, the role of non-cash support for parents (such as child-care subsidies) or of the incomes of other household members (such as adult siblings or grandparents). Nevertheless, this study has demonstrated the potential – and some of the complications – of comparing systems of support by "swapping" them between countries. This method using microsimulation allows us to distinguish between the effects of level of spending, the relative importance of policy structure and design, and the differential impacts of policies in particular national contexts.

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Abstract

We compare three EU countries that have recently experienced substantial but very different reforms of their family support systems: Austria, Spain and the UK. The structure of these systems is different: Austria emphases universal benefits, Spain tax concessions and the UK means-tested benefits. First the paper compares the distributional implications of these three approaches. The recent reforms have reinforced existing structures while increasing the amount of spending for children. The second step is to ask: What would have happened if these countries had transformed the architecture of their systems in either of the other two directions? We use EUROMOD, the European tax-benefit microsimulation model that is designed for making cross-country comparisons and answering “what if” questions such as these. We find that the three factors that can be distinguished – the level of spending, its structure, and the way it impacts in a national context – are all important to varying degrees.

Keywords

Children, European Union, policy reform, microsimulation

JEL Classification

C8, I3

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